"As regards Kerguelen's Land, this large island (100 by 50 miles) was last visited in 1840, by the Antarctic Expedition under Sir James Ross, in mid-winter only, when it was found to contain a scanty flora of flowering plants, some of which belong to entirely new types, and an extraordinary profusion of marine animals and plants of the greatest interest, many of them being representatives of north-temperate and Arctic forms of life.

"H.M.S. *Challenger* will no doubt visit Kerguelen's Land, and collect largely; but it is evident that many years would be required to obtain even a fair representation of its marine products; and though we are not prepared to say that the scientific objects to be obtained by a naturalist's visit to Kerguelen's Land are of equal importance to those which Rodriguez will yield, we cannot but regard it as in every respect most desirable that the rare opportunity of sending a collector to Kerguelen's Land should not be lost."

I may further state as a matter of great scientific interest, that Rodriguez contains the remains of a gigantic species of land-tortoise allied to those still surviving in some other islands of the Mauritius group, and that the nearest allies of these are the gigantic tortoises of the Galapagos Islands in the opposite hemisphere of the globe, as one of our Fellows, Dr. Günther, has shown in a paper read last session to the Society. Very valuable collections of these fossils have been made by Mr. Newton, the Colonial Secretary of Mauritius, during a brief stay which he was enabled to make in Rodriguez; but the materials are far from sufficient for obtaining all the information we want.

In accordance with your Council's recommendation, the Treasury sanctioned the appointment of four naturalists—three to Rodriguez, and one to Kerguelen's Land. Those sent out to Rodriguez are:—Mr. I. B. Balfour, son of Prof. Balfour, of Edinburgh, F.R.S., who, besides being educated as a botanist, has worked as a field geologist in the Geological Survey of Scotland; he is charged with the duties of botanist and geologist; Mr. George Gulliver, son of one of our Fellows and a pupil of Prof. Rolleston, in Oxford, who goes out as naturalist; and Mr. H. H. Slater, who has had great experience as a cave explorer, and who will devote his attention especially to the collection of fossils.

The Kerguelen's Land duties are undertaken by the Rev. A. E. Eaton, M.A., a gentleman most favourably known as an entomologist, and who had made very important collections in Spitzbergen, which he visited for the purpose of studying its fauna and flora. These gentlemen had, by the last accounts, all proceeded to their destinations.

(*To be continued.*)

FRENCH ACADEMY OF SCIENCES.—ANNIVERSARY MEETING

THIS Anniversary took place on the 28th December, the president being M. Faye, who delivered an able address, giving some interesting details as to the history of the prizes offered for competition by the Academy.

One of the first ever offered was a sum of 4,000*l.* given by Philippe d'Orleans, then Regent of France, in 1716, to be awarded to the person or persons who should invent a method of determining longitude at sea. This handsome sum was not awarded to anyone up to 1793, when the Academy was suppressed, M. de Choiseuil, French Ambassador to England, having made fruitless exertions on behalf of Harrison, the well-known chronometer maker, in 1763.

A circumstance connected with these old prizes is worth noting. La Condamine, about 100 years ago, offered a prize for an essay on the question "why so many differences of colour were noted between the male and female livery in quadrupeds as well as in birds." The question being deemed useless, the money was not accepted by the Academy.

In the last century almost all the prizes were won by Euler and Bernouilly, but now scarcely any of the prizes, amounting to 160*l.*, are awarded; sometimes nobody competes for them.

Although the distribution this year is both for 1872 and 1873, only two of the competitive prizes have been taken, one for 1873 by M. Mascart, professor in the Collége de France, for a paper on the modification which the light of the sun undergoes in consequence of the motion either of the sun or of the earth. M. Mascart failed to observe any modification, but the prize was given to him owing to the care and ingenuity displayed in his experiments. One prize was also won by M. Balbrain for a paper on the reproduction of animals that present parthenogenetic phenomena.

The proceeds of the 4,000*l.* offered by M. Breaut to the person who should discover a cure for the cholera was divided between several partly successful essayists for 1872 and 1873, but it is not likely that the sum itself will ever be parted with by the Academy.

The prizes offered for general excellence or voluntary work on a certain subject have been a great deal more fortunate, so that the method adopted by the Royal Society promises better results than the old academical competitive system, even in Paris. The Plumly prize of 120*l.* for the best paper on the improvement of steam navigation was gained for 1872 by M. Zaurines, who has carefully investigated propulsion by the Archimedean screw; in 1873 by M. Bertin, for a paper on the best method of ventilating steamers.

The Lalande prize in astronomy has been gained for 1872 by the brothers Henry for the discovery of a number of small planets at the Paris Observatory, and in 1873 by M. Coggia, of the Observatory of Marseilles, for his discoveries among comets.

The Poncelet prize has been given for 1872 to M. Mannheim for the general excellence of his geometrical disquisitions, and in 1873 to Sir W. Thomson for his magnificent works on the mathematical theory of electricity and magnetism.

The Godard prize for 1872 has been awarded to Dr. Pettigrew for his work "On the Muscular Arrangements of the Bladder and Prostate, and the manner in which the Ureters and Urethra are closed."

The aggregate sum to be awarded yearly, exclusive of the Breaut prize, is 4,400*l.*, and the number of prizes nineteen, only a few being for subjects specially proposed by the Academy. The competition is open to all nations. The names of competitors must be placed in sealed envelopes, which are opened only in the case of those who succeed; but, except in the case of prizes given for general excellence, papers must be written either in Latin or in French.

SCIENTIFIC SERIALS

Jahrbuch der k.k. geologischen Reichsanstalt. Band xxiv. Nos. 1 and 2.—The first article in No. 1 is by Dr. A. Redtenbacher, and treats of the stratigraphical relations of the mesozoic formations as developed in the district of Gams, near Hieflau. The second paper, by Dr. C. Doelter, gives some account of the Siebenbürgischen metalliferous mountains. The district described lies south of the river Arranyos, between Offenbánya and Bistra, as far as the Maros. The formations developed in this district consist of (1) crystalline, metamorphic, and eruptive rocks (gneiss, crystalline limestone, granite, diorite, syenite); (1) Jurassic and cretaceous (limestone, melaphyre and augite porphyry, sandstone, chalk, &c.); (3) Tertiary (comprising, besides various fossiliferous deposits, such igneous rocks as hornblende-andesite, augite-andesite, basalt); (4) alluvium. A sketch-map accompanies Dr. Doelter's communication.—Herr R. Hörnes contributes a paper entitled "Tertiary Studies," in which he gives an account of the mollusca met with in various Tertiary deposits (as at Kischeneff, Jenikale, &c.) A number of the species described are new to science. Four excellent plates illustrate the paper.—Dr. E. Mojsisovics, whose contributions to the *Jahrbuch* are both frequent and valuable, gives us a long paper on the Triassic period in the East Alps. He discusses the distribution of the Triassic fauna, and shows that the formation itself may be divided into zones, each characterised by certain well-marked species; further, he describes at length the nature of the deposits, and points out that the trias is characterised throughout by the constant presence of poorly fossiliferous limestone and dolomite and richly fossiliferous marl and calcareous marl.—The only geological paper in No. 2 is one by Dr. Guido Stache, On the palæozoic regions of the East Alps. The author describes in considerable detail the structure of the rock-masses forming the Alpine lands of Austria, and gives a coloured geological map of the regions described, and two plates of horizontal sections.—Amongst the mineralogical papers accompanying these numbers of the *Jahrbuch* may be noted one by Dr. Doelter, On the trachyte of the Siebenbürgischen metalliferous mountains, in which a number of analyses are given.—Herr Kalkowsky furnishes an account of the microscopy of the felsite and pechstein of Saxony.—A new mineral (Ludwigite) from Banat is described by Tschermak; and a

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Report of the volcanic eruptions and earthquakes that took place during last year, is given by C. W. Fuchs. The latter author furnishes a translation from the Swedish of Nauckhoff's paper On the occurrence of native iron in a basalt vein at Ovifak, in Greenland, in connection with which we note also a paper by the editor (Tschermak) On the meteorite-find in Greenland.

Astronomische Nachrichten, No. 2015, contains a detailed statement of observations made at Washington by Cleveland Abbe on the position of Coggia's comet, together with the form of the tail, its length, and other details.—F. Tietjen gives elements of Dr. Paliser's planet (139), together with an ephemeris for November and December.

Memorie della Societa degli Spettroscopisti Italiani.—Father Secchi sends an account of his observations on the solar eclipse of October last. He observed the contacts of the limbs of the sun and moon by the spectroscopic method, and discusses its advantages over the ordinary method with the simple telescope.—The same author sends drawings of the chromosphere from December 26, 1873, to August 2, 1874, and he remarks on the continual diminution in the frequency and height of the prominences in accordance with the diminution in number of sun-spots. The sun appears to have been seen, on an average, rather oftener than every other day.

Annali di Chemica applicata alla Medicina, vol. lix., No. 3, September, opens with a paper in the Pharmaceutical Section by Prof. Borsarelli, of Turin, entitled "General and Comparative Study of the Pharmacopœias of Europe and America."—In the same section is a paper by Dr. C. Girard, On protoxalate of iron, and one by Leger, On a tartrate of magnesium lemonade.—In Hygiene there is a paper by Cunningham, On the microscopical examination of the air.—Drs. Lanzi and Terrigi communicate a paper to the Pathological Section, on palustrine miasma.

SOCIETIES AND ACADEMIES

LONDON

Linnean Society, Dec. 17.—Dr. Allman, president, in the chair.—The President read a paper on the Diagnosis of new Genera and Species of Hydroids. Several very interesting collections of Hydroida had recently been placed in the author's hands for determination. One of the most important of these is from the zoological museum of the University of Copenhagen, and consists entirely of gymnoblastic forms obtained from various parts of the world, but principally from the Scandinavian shores. The author is indebted for it to Prof. Lütken, of the University of Copenhagen. Another collection, consisting of calyptoblastic forms, was made in the Japan seas by Capt. St. John, of H.M.S. *Sylvia*, and sent to the author for determination by Mr. J. Gwynn Jeffreys, by whom it is destined for the British Museum. For another valuable collection, containing many new species, the author is indebted to Mr. Busk; while a collection, belonging chiefly to the family of Plumularidæ, was made by Mr. Holdsworth in Ceylon, and contains several curious forms; and, lastly, for a small collection from the shores of Spitzbergen, the author is indebted to the Rev. Mr. Eaton, by whom it was obtained during a recent yacht voyage to that region. Among the new species from the Copenhagen Museum, one of the most interesting is a Hydractinia, from Spitzbergen. It is distinguished from *H. echinata* of our own shores by its nearly smooth spines, but more especially by the peculiar condition of its gonosome, the blastostyles being destitute of the capitulum which forms so characteristic a feature in *H. echinata*, while each carries only a single spherical sporosac of comparatively enormous size. He proposes for it the name of *H. monocarpa.* The same collection contains a new Cladocoryne, the second species as yet discovered of this remarkable genus. It was found attached to Gulf-weed, and is especially interesting in being provided with its reproductive zooids, structures hitherto unknown in the genus. These are developed among the tentacles, and are almost without doubt medusiform, though this point could not be determined with absolute certainty. For the new species the name of *C. pelagica* was proposed. Another hydroid from the same collection was a beautiful Amalthæa, a genus nearly allied to Corymorpha. It was obtained from Iceland. One of its most striking features consists in the great length of its proximal tentacles; these are nearly as long as the entire stem round which, in the living animal, they must have hung down in the form of a graceful inverted tassel of flexile filaments subject to the impulse of every passing current of the surrounding water. The name of *A. islandica* was proposed for it. The Japan collection contained, among other interesting species, a Campanularia, remarkable for the comparatively enormous size of its cups, which exceeded by about five times the dimensions of those of the largest British species. It was named *C. grandis.* This collection contained also a beautiful Thuiaria, for which the name of *T. coronata* was proposed, and in which the female gonangium or receptacle for the ova was crowned by about nine very long bifurcating hollow spines, which formed a cage-like chamber into which the ova subsequently passed. An extension of the cœnosarc is continued from the enlarged summit of the blastostyle or fleshy columnar axis of the gonangium through the whole length of the spines; and as the blastostyle must be homologically regarded as a hydranth arrested and adapted to functions connected with reproduction instead of nutrition, the author looked upon the spines as representing the tentacles of a hydranth which had lost their prehensile functions, become clothed with chitine, and adapted to the protection of the ova during an early period of their development. Mr. Busk's collection contained many beautiful new species of calyptoblastic hydroids. Among these was a Sertularella, whose tubular hydrothecæ, free from the stem in nearly their entire length, were deeply cleft at their distal ends, in the manner of a mitre. For this curious species the name of *S. episcopus* was proposed. A new genus, under the name of *Gemmimella*, was constituted for a sertularia-like form, in which the hydrothecæ, instead of being situated on the opposite sides of the stem, were all brought to the front of the stem, and there became adnate to one another in pairs. A beautiful Thuiaria, with a remarkable dicholomous ramification of the main stem, and with the gonangia situated in the axils of the branches, presented a striking resemblance to the inflorescence of certain common caryophyllaceous plants, and was named *T. Cerastium.* Mr. Holdsworth's collection, made on the coast of Ceylon, contains some very remarkable species. Among these is a magnificent Plumularian of the Aglaophenian type, rendered striking by the great length of its mesial nematophores, and by the presence of two very long divergent teeth which project from the margin of the remarkably patulous hydrothecæ. The species grows in the form of crowded tufts of beautifully graceful plumes. It would seem to belong to the group which Kirchenpauer places in his sub-genus Makrorynchia, and the name of *Makrorynchia insignis* is now proposed for it; but as no gonosome has as yet been found in any of the specimens, the generic name is only provisionally assigned to it. For another beautiful form from the same collection the author has constituted a new genus under the name of *Taxella.* Its hydrothecæ and nematophores are formed on the type of those of the genus Aglaophenia, but its gonophores are not protected by corbulæ, and its ramification presents the peculiarity of being doubly pinnate, so that it represents in the Aglaophenia section of the Plumularidæ a form which in the Plumularian section is represented by the genus Diplopteron, a genus recently constituted by the author for one of the deep-sea hydroids of the *Porcupine* Exploring Expedition. The name of *Taxella eximia* is assigned to the present species, which grows in dense tufts to the height of about a foot. In Mr. Eaton's collection, from Spitzbergen, the only well-preserved hydroid is a little Sertularia with regularly pinnate ramification, elongated hydrothecæ, and a long ovate gonangium curiously constricted near its middle. The author gives it the name of *S. arctica.*

Geologists' Association, Dec. 4.—Henry Woodward, F.R.S., president, in the chair.—Dr. W. B. Carpenter, F.R.S., On the conditions which determine the presence or absence of animal life on the deep-sea bottom.

EDINBURGH

Royal Society, Dec. 21.—Prof. Kelland, vice-president, in the chair.—The following communications were read:—Remarks on the great logarithmic table computed at the Bureau du Cadastre under the direction of M. Prony, by Mr. Edward Sang.—On the elimination of α, β, γ, from the conditions of integrability of S. $U\alpha\delta\rho$, S. $U\beta\delta\rho$, S. $U\gamma\delta\rho$, by M. G. Plarr. Communicated by Prof. Tait.—The development of the ova and structure of the ovary in the Mammalia, by James Foulis, M.D. Communicated by Prof. Turner.—Mathematical Notes, by Prof Tait:—(1), On a singular theorem given by Abel; (2), On the equipotential surfaces for a straight wire; (3), On a fundamental principle in Statics.

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